Diagnosis, Treatment, and Prevention of STIs for Transgender People

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Disclosure

I have no financial conflicts of interest.
Objectives

1. Discuss the epidemiology of sexually transmitted infections (STIs) in transgender populations.
2. Identify factors that increase STI risk among transgender people.
3. Describe approaches to STI testing, treatment, and prevention for transgender people.
Limitations of research

1. Reliance upon convenience samples
2. Conflation of transgender and LGB groups, especially MSM
3. Lack of data about non-HIV STIs
4. Lack of data about STI vulnerability and test performance in surgically-modified genitalia
Case

- A 39-year-old transgender woman presents for preventive care.
- **Past medical history:** Breast augmentation, orchiectomy, silicone injections, syphilis, HCV (cured)
- **Medications:** TDF-FTC, estradiol, cholecalciferol
- **Social history:** Lives alone, smokes cigarettes and marijuana, unemployed
- **Sexual history:** Oral and receptive anal sex without condoms with 3 cisgender men in the past year, occasionally transactional sex
Epidemiology
STIs are more than the “big three.”

Parasites
- *Giardia lamblia*
- *Entamoeba histolytica*
- Ectoparasites

GI bacteria
- *Shigella*
- *Campylobacter*

Viruses
- Human papillomavirus
- Herpes simplex virus
- Hepatitis A
- Hepatitis B
- Hepatitis C

Some transgender groups face a high burden of STIs.

- **United States systematic review:**
  - STI lifetime prevalence = 21.1%, greater in MTF than FTM people

- **Prospective study of 230 MTF people New York City:**
  - Syphilis incidence 3.6% per year
  - Gonorrhea incidence 4.2% per year
  - Chlamydia incidence 4.5% per year

- **Retrospective study of 145 young people in Boston:**
  - Prevalence of syphilis 2.8%
  - Prevalence of gonorrhea and chlamydia 2.1% each

- **Transgender women in iPrEX:**
  - 38% reported an STI in the prior 6 months

Several factors are associated with STIs among transgender women.

- Receptive anal intercourse
- Sex work
- Abuse, including anti-transgender violence
- Substance abuse
- Depression

Transgender women in iPrEX reported more HIV risk factors than MSM.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Transgender women (N=339)</th>
<th>MSM (N=2,160)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 sexual partners</td>
<td>57%</td>
<td>32%</td>
</tr>
<tr>
<td>Condomless receptive anal sex</td>
<td>86%</td>
<td>55%</td>
</tr>
<tr>
<td>Cocaine or methamphetamine use</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>STI in the past 6 months</td>
<td>38%</td>
<td>24%</td>
</tr>
<tr>
<td>Transactional sex</td>
<td>64%</td>
<td>38%</td>
</tr>
</tbody>
</table>

P values < 0.001 for all comparisons.

Clinical evaluation and treatment
Tips for taking a sexual history

1. Make it routine and confidential
3. Inquire about sexual function, satisfaction, and reproductive desires, not just STI risk.
4. Mirror patient’s language, if possible.
Example questions

Not preferred:
• Do you have a girlfriend, boyfriend, wife, husband?
• You’re monogamous, right? (or any other leading question)
• Do you have sex with men, women, or both men and women?

So-So:
• Are you sexually active?

Best:
• Have you had sex in the past year?
• What type of sex did you have?
• Has anyone’s penis been in your rectum? (or another similarly specific question)
CDC’s 2015 STD Treatment Guidelines

“Clinicians should assess STD- and HIV-related risks for their transgender patients based on current anatomy and sexual behaviors. Because of the diversity of transgender persons regarding surgical affirming procedures, hormone use, and their patterns of sexual behavior, providers must remain aware of symptoms consistent with common STDs and screen for asymptomatic STDs on the basis of behavioral history and sexual practices.”
My approach

- Screen based on the sexual history, including:
  - Syphilis and HIV serology
  - NAAT for gonorrhea and chlamydia at all exposed sites (but no pharyngeal testing for chlamydia)

- Frequency:
  - Every 3 months for those on PrEP or at very high risk
  - Otherwise annually or even less often, depending on the sexual history
Approach to the physical examination

- “Trauma-informed”
- Greet the patient while they are dressed
- Use a chaperone
- Describe what you intend to do in a step-by-step fashion
- Only examine what is necessary for the clinical issue at hand
Syphilis testing follows a “traditional” or “reverse” testing algorithm. 

[Diagram showing the testing algorithm with two paths: Traditional and Reverse sequence.]
What we know about gonorrhea and chlamydia testing in cisgender people

**WOMEN**
- NAATs are preferred.
- Sensitivity of first-catch urine is 10% less than a vaginal swab.
- A self-collected vaginal swab performs as well as a clinician-collected swab.
- Vaginal swabs perform as well as endocervical swabs.

**MEN**
- NAATs are preferred.
- Sensitivity of first-catch urine is the same as a urethral swab.

Unanswered questions

- What is the risk of STIs in surgically-constructed vaginas and penises?
  - Vaginoplasty techniques may involve urethral or colorectal mucosa, which is presumably susceptible to infection.

- What is the optimal screening strategy for gonorrhea/chlamydia in the setting of genital reconstruction?
  - Urine NAAT versus vaginal/urethral NAAT in vaginoplasty/phalloplasty
  - Some experts consider urine NAAT preferred.

- Do STIs present differently in reconstructed tissue?
  - Case report of neovaginal gonorrhea presenting as coital bleeding

A few reminders

- Neovaginas have no cervix, so cervical cytology is unnecessary.
- The prostate is not typically removed in gender-affirming surgery.
- The anoscope, rather than a speculum, may be most appropriate for examination of the neovagina.
- Transmasculine people taking testosterone may have vaginal atrophy, so use a small speculum for vaginal/frontal examinations.

Case, continued

- A 39-year-old transgender woman presents for preventive care.
- **Past medical history:** Breast augmentation, orchiectomy, silicone injections, syphilis, HCV (cured)
- **Medications:** TDF-FTC, estradiol, cholecalciferol
- **Social history:** Lives alone, smokes cigarettes and marijuana, unemployed
- **Sexual history:** Oral and receptive anal sex without condoms with 3 cisgender men in the past year, occasionally transactional sex
- **Laboratory results:** Rectal NAAT positive for *N. gonorrhoeae*
### SUMMARY OF THE 2015 CDC SEXUALLY TRANSMITTED DISEASE (STD) TREATMENT GUIDELINES
MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (MDPH) – DIVISION OF STD PREVENTION (DSTD)

These guidelines for treatment of STDs reflect recommendations of the MDPH DSTDP and of the CDC STD Treatment Guidelines. These guidelines focus on STDs encountered in outpatient settings and are not an exhaustive list of effective treatments. Please refer to the complete CDC document for more information or call the DSTDP. Clinical and epidemiological services are available through the DSTDP including staff to assist healthcare providers with confidential notification of sexual partners of patients with STDs and/or HIV infection. Please call the DSTDP for assistance at (617) 983-6940.

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>RECOMMENDED TREATMENT</th>
<th>ALTERNATIVES (use only if recommended regimens are contraindicated)</th>
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</thead>
<tbody>
<tr>
<td><strong>SYPHILIS</strong></td>
<td></td>
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<tr>
<td><strong>ADULTS</strong></td>
<td></td>
<td></td>
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<tr>
<td>PRIMARY, SECONDARY OR EARLY LATENT (&lt;1 YEAR)</td>
<td>• Benzathine penicillin G 2.4 million units IM once</td>
<td>(For penicillin-allergic non-pregnant patients only) • Doxycycline 100 mg orally 2 times a day for 14 days OR • Tetracycline 500 mg orally 4 times a day for 14 days</td>
</tr>
<tr>
<td>LATE LATENT (&gt;1 YEAR) OR LATENT OF UNKNOWN DURATION</td>
<td>• Benzathine penicillin G 2.4 million units IM for 3 doses at 1 week intervals (total 7.2 million units)</td>
<td>(For penicillin-allergic non-pregnant patients only) • Doxycycline 100 mg orally 2 times a day for 28 days OR • Tetracycline 500 mg orally 4 times a day for 28 days</td>
</tr>
<tr>
<td>All Suspect Syphilis Cases: Call the STD Program at (617) 983-6940 for past titers and treatment.</td>
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<tr>
<td><strong>NEUROSYPHILIS</strong> including OCULAR SYPHILIS</td>
<td>• Aqueous crystalline penicillin G 18-24 million units per day, administered as 3-4 million units IV every 4 hours or continuous infusion, for 10-14 days.</td>
<td>• Procaine penicillin G 2.4 million units IM once daily PLUS probenecid 500 mg orally 4 times a day, both for 10-14 days</td>
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<tr>
<td><strong>CHILDREN</strong></td>
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<tr>
<td>PRIMARY, SECONDARY OR EARLY LATENT (&lt;1 YEAR)</td>
<td>• Benzathine penicillin G 50,000 units/kg IM once, up to adult dose of 2.4 million units</td>
<td>No specific alternative regimens exist.</td>
</tr>
<tr>
<td>LATE LATENT (&gt;1 YEAR) OR LATENT OF UNKNOWN DURATION</td>
<td>• Benzathine penicillin G 50,000 units/kg IM (up to adult dose of 2.4 million units) for 3 doses at 1 week intervals (up to total adult dose of 7.2 million units)</td>
<td></td>
</tr>
<tr>
<td><strong>CONGENITAL SYPHILIS</strong></td>
<td>See complete CDC guidelines.</td>
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</tr>
<tr>
<td><strong>HIV INFECTION</strong></td>
<td>Same stage-specific recommendations as for HIV-negative persons.</td>
<td></td>
</tr>
<tr>
<td><strong>PREGNANCY</strong></td>
<td>Penicillin is the only recommended treatment for syphilis during pregnancy. Women who are allergic should be desensitized and treated with penicillin. Treatment is the same as in non-pregnant patients for each stage of syphilis.</td>
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### GONOCOCCAL INFECTIONS

| ADULTS, ADOLESCENTS AND CHILDREN ≤45 kg | | |
| PHARYNGAL, URGENITAL, RECTAL | • Ceftriaxone 250 mg IM once PLUS³ | Note: Use of an alternative regimen for pharyngeal gonorrhea should be followed by a test-of-cure 14 days after treatment.¹
For urogenital or rectal infections ONLY, and ONLY if ceftriaxone is not available:
• Cefixime 400mg orally once PLUS³
• Azithromycin 1 g orally once OR in case of azithromycin allergy
• Doxycycline 100 mg orally 2 times a day for 7 days
For azithromycin allergy:
• Ceftriaxone 250 mg IM once PLUS³
• Doxycycline 100 mg orally 2 times a day for 7 days
For cephalosporin allergy or IgE-mediated penicillin allergy:
• Gemifloxacin 320 mg orally once OR
• Gentamicin 240 mg IM once PLUS³
• Azithromycin 2 g orally once |

³Alternative regimen to be followed by a test-of-cure 14 days after treatment.
¹Test-of-cure may be followed when the patient has had no signs or symptoms of disease for >48 hours after the last dose of an appropriate antibiotic. A negative test-of-cure indicates successful treatment."
Prevention
STI prevention for transgender people

1. Addressing socioeconomic factors that increase vulnerability

2. Vaccines – HAV, HBV, HPV

3. Condoms and risk reduction counseling

4. PrEP for those at risk for HIV

5. STI screening and treatment – interrupting transmission prevents future infections
Novel approaches – HPV self screening for transmasculine people

- 131 transmasculine people with self- and provider-collected HPV tests
- 21 provider-collected swabs were positive.
- 15 of the self-collected swabs were positive. 
  - 71.4% sensitive, 98.2% specific
- > 90% of participants preferred self collection.

Take-home points

- Some transgender people face a high burden of STIs.
- For the most part, testing and treatment for STIs is the same in transgender and cisgender people.
- Uncertainty exists regarding the clinical manifestations and optimal testing strategy for STIs affecting surgically-constructed genitalia.
Thank you

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